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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,290	01/25/2005	Dolf Henricus Jozef Van Casteren	NL 020685	8837

24737 7590 05/22/2006

PHILIPS INTELLECTUAL PROPERTY & STANDARDS
P.O. BOX 3001
BRIARCLIFF MANOR, NY 10510

EXAMINER

TRAN, THUY V

ART UNIT PAPER NUMBER

2821

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H.F.

Office Action Summary	Application No.	Applicant(s)	
	10/522,290	VAN CASTEREN ET AL.	
	Examiner	Art Unit	
	Thuy V. Tran	2821	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/25/2005 & Prel. Amendment conc. filed.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11, 13 and 14 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>08/22/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This is a response to the Applicants' filing on 01/25/2005 and preliminary amendment concurrently filed therewith. In virtue of this amendment, claims 1-14 are currently presented in the instant application.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 08/22/2005 is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Drawings Objection

3. The drawings are objected to because Figs. 1-2 are not labeled correctly.

4. Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g).

5. The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "light generating assembly" recited in line 1 of claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet,

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even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections/ Minor Informalities

6. Claims 4, 11, and 12 are objected to because of the following informalities:

Claim 4, line 8, “said” should be changed to --a--;

Claim 11, line 2, “the” should be changed to --a--;

Claim 12, line 4, “may differ” should be changed to --differs--; and

Claim 12, line 5, “may have” should be changed to --has--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

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8. Claims 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 10 recites the limitation "the output voltage control unit" in lines 2, 5, and 8.

There is insufficient antecedent basis for this limitation in the claim.

10. Claim 11 is also rejected under 35 U.S.C. 112, second paragraph, since it is dependent on claim 10.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (Pub. No.: US 2003/0080695 A1) in view of Nagase et al. (U.S. Patent No. 4,912,374).

With respect to claim 1, Ohsawa discloses, in Fig. 7, a two-stage electronic ballast for driving a gas discharge lamp comprising (1) an inverter [11] commutating forward stage comprising a series arrangement of a first buffer capacitor [7] and a second buffer capacitor [8] between two input terminals (of the inverter [11]), and (2) a double fly-back converter stage comprising an inductive energy storage buffer [1, 2] having at least one input circuit (which is

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made of a primary winding of [1] and [2]) suitable for receiving a rectified AC mains input voltage (since [3] is a DC power supply; see Prior Art of Record U.S. Patent No. 4,980,811; Fig. 10); the buffer further having at least two output circuits (one is made of [1_{s-2}, 5, 7] and another made of [1_{s-2}, 1_{s-1}, 8, 6]), each output circuit being coupled to a respective buffer capacitor [7 or 8] of said commutating forward stage for individually charging said buffer capacitors [7, 8].

Ohsawa does not specifically teach that the inverter [11] be a half-bridge one.

Nagase et al. discloses, in Fig. 6, a half-bridge inverter [Q1, Q2] having two capacitors [C3, C4] connected in series at its input terminals forming a commutating circuit [Q1, Q2, C3, C4].

It would have been obvious to one of ordinary skill in the art at the time of the invention to implement the inverter circuit of the ballast of Ohsawa with a half-bridge inverter to drive the lamp for its simplified circuit arrangement and thus low cost since such a configuration of the half-bridge inverter for the stated purpose has been well known in the art as evidenced by the teachings of Nagase et al. (see col. 1, line 56).

13. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohsawa (Pub. No.: US 2003/0080695 A1) in view of Nagase et al. (U.S. Patent No. 4,912,374) as applied to claim 1 above, and further in view of Ishizuka (U.S. Patent No. 6,163,115).

With respect to claim 13, the combination of Ohsawa and Nagase et al. disclose all of the claimed subject matter, as expressly recited in claim 1, except that the lamp specifically be a metal halide lamp.

Ishizuka discloses, in Figs. 3 and 5A-B, a light generating assembly comprising a metal halide lamp [35] (see col. 9, line 61) and an electronic ballast [21].

It would have been obvious to one of ordinary skill in the art at the time of the invention to arrange the ballast of the combination of Ohsawa and Nagase et al. in the light generating assembly of Ishizuka, in lieu of the ballast of Shizuka, in order to achieve an operation at a wide output voltage range since the ballast of the combination of Ohsawa and Nagase et al. employs both forward and flyback functions (see paragraph [0021], lines 3-8).

With respect to claim 14, the combination of Ohsawa, Nagase et al., and Ishizuka disclose that the lamp is of a type which has varying light generating properties depending on the DC current level (see Ishizuka; col. 1, lines 28-32).

Allowable Subject Matter

14. Claims 2-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- Two-stage electronic ballast for driving a gas discharge lamp, specifically a HID lamp, more specifically a metal halide lamp, the ballast comprising a lap current control unit operatively coupled to said two controllable switches, whereas in a second half period, the second switch is maintained in an open condition while the first switch is switched open and closed at a relatively high frequency, in combination

with the remaining claimed limitations as called for in claim 2 (claim 12 would be allowable since it is dependent on claim 2);

- Two-stage electronic ballast for driving a gas discharge lamp, specifically a HID lamp, more specifically a metal halide lamp, wherein the second output circuit of the inductive energy storage buffer comprises said first winding, said first winding having a free end and a second end connected to said second winding, the second output circuit further comprising said common conductor and a second diode coupled between said free end of the first winding and the second bridge input terminal, in combination with the remaining claimed limitations as called for in claim 4 (claims 4-8 would be allowable since they are dependent on claim 4; claims 10-11 would be allowable following claim 4 if corrected to overcome the rejections under 35 U.S.C. 112, second paragraph set forth above);
- Two-stage electronic ballast for driving a gas discharge lamp, specifically a HID lamp, more specifically a metal halide lamp, wherein the inductive energy storage buffer further comprises an output voltage control unit operatively coupled to said third controllable switch, the output voltage control unit being adapted to control the operative state of said third controllable switch such that the output voltage of the flyback converter stage, as measured between the two bridge input terminals, remains substantially at a predetermined constant value, in combination with the remaining claimed limitations as called for in claim 9.

Citation of relevant prior art

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Prior art Chen et al. (U.S. Patent No. 6,624,599 B1) discloses a compact single-stage ballast circuit;

Prior art Hwang et al. (U.S. Patent No. 6,344,980 B1) discloses a power converter circuit;

Prior art Mirskiy et al. (U.S. Patent No. 6,111,365) discloses a ballast circuit;

Prior art Blom (U.S. Patent No. 6,005,353) discloses a ballast circuit;

Prior art Gu et al. (U.S. Patent No. 5,907,223) discloses a ballast circuit;

Prior art Choi et al. (U.S. Patent No. 5,642,065) discloses a ballast circuit;

Prior art Small (U.S. Patent No. 5,568,373) discloses a power converter circuit; and

Prior art Ota (U.S. Patent No. 4,412,156) discloses a power supply for lamps.

Inquiry

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuy V. Tran whose telephone number is (571) 272-1828. The examiner can normally be reached on M-F (8:00 AM -4:00 PM).

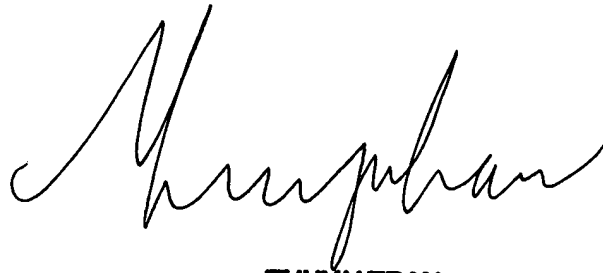
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on (571) 272-1740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

05/17/2006

A handwritten signature in black ink, appearing to read 'Thuy V. Tran', with a stylized, cursive script.

THUY V. TRAN
PRIMARY EXAMINER